

In the Drawings

Replacement drawings of Figures 1, 4 and 6 are enclosed herewith in which Figure 1 has been amended to replace the reference numeral of the tape. In Figures 4 and 5 the staple now has reference numbers applied. In Figure 6 the staples also have reference numbers applied. A copy of the original figures is enclosed for the Examiner's convenience.

REMARKS:

In regard to the objection to the specification in Paragraph 1 a SUBSTITUTE SPECIFICATION has been filed herewith, together with a copy of the original specification marked to show all changes made in the original specification since filing, including those previously presented.

In regard to the first objection to the new matter in Paragraph 2 the Examiner has stated that the term "connecting bridge" introduces new matter. This term was entered in relation to a conventional staple, which is clearly fully described in the original specification, to identify that conventional part of a conventional staple which bridges to the two legs or pins of the staple. The term has now been changed to "crown" which is taken from Wikipedia as a source of conventional terms. Thus it is clear that the staple shown in Figures 4, 5 and 6 includes a "crown" 90 and two legs or pins 91. This is not a new element in the specification but is merely an attempt to name a part of the described staple 9 or 10 so that the orientation of the named crown shown in Figures 4, 5 and 6 can be defined in regard to that shown in Figure 6. Thus in Figure 6 as filed, the staple, called a "moisture probe", clearly is oriented with its "crown" along the conductor and not bridging the conductor as discussed below.

The "crown" is therefore not a new element since it is merely a conventional piece of a conventional staple. The statement that the orientation of the staple is with the crown along the conductor is not new matter since it is shown in Figure 6

In regard to the second objection to the new matter in Paragraph 2 the Examiner has stated that the term "pair 9A and 10A" introduces new matter. However this amendment merely places reference numbers on the items clearly described in the original specification. Thus the original specification defines:

"Typically up to ten pairs of moisture probes may be inserted on a single section of detection tape."

It has now been added to the specification that:

"(This includes), as shown in Figure 6, a first pair 9, 10 of said up to ten pairs and a second pair 9A, 10A of said up to ten pairs."

Thus the second pair 9A, 10A are merely one pair of said "up to ten pairs" previously described. In Figure 6 the first and second pairs (of said up to ten pairs) are now shown and marked as 9, 10 and 9A, 10A. Thus the second pair of the ten pairs has been added into Figure 6. The remaining eight pairs (of said up to ten pairs) have not been added for convenience of illustration and are therefore not shown.

In regard to the objection to the drawings in Paragraph 3, Figure 1 has been amended to replace the reference number 10 applied to the tape by new reference number 100 so as to overcome the duplication.

In regard to the objection under 35 USC 112 in Paragraph 4 it is pointed out to the Examiner that there is no disclosure nor any suggestion in this specification nor in any paper filed in this application that a pair of probes can be defined by a

single staple which bridges the conductors. Clearly such a construction cannot work as it will short out the conductors and there is no suggestion that it will work.

In the claims defined herein, there are pairs of probes at spaced positions along the tape.

In the claims defined herein, each separate probe of the pair of probes can be a single pin, of the known type shown for example in Roseneau (4,259,633 cited as prior art). These "probes" are previously known as for example from Roseneau and the term "probe" would typically mean a pin or rod unless otherwise defined.

In the claims defined herein, each separate probe of the pair of probes can be a double pin in the form of a conventional staple, as clearly stated in the specification. When a staple is used as one of the probes of the pair, both pins of that probe defined by the staple penetrate the same conductor as shown clearly in original Figure 6.

The original specification does not state that the probes must be staples. This is merely an option. This is clear from claims 6 and 7 where the U-shape of the staple is clearly an option as set out in claim 7.

Each of the independent claims has been amended to define this construction using terms which avoid any doubt.

The only suggestion in this matter that a single staple could bridge the first and second conductors has arisen from the misunderstanding by the Examiner of the construction defined. It is submitted that it has now been made fully clear that this construction is not intended, is not viable and is not included within the claims.

Turning now to the rejection under 35 USC 103 as set out in Paragraph 6 et seq, independent Claim 27 to the method using a tape without probes has been cancelled without prejudice and will be pursued in a divisional application.

New claim 29 has been added which is directed to the same invention as claims 12 and 21. In this way the remaining independent claims 12, 21 and 29 are all directed to a method which uses both tape and probes to measure moisture levels within and on the surface of the absorbent material.

Thus the invention has nothing to do with methods of mounting tapes on a surface of a material. Thus the invention has nothing to do with the use of staples for fastening materials. These methods are previously known.

The present invention is based on the analysis by the inventors that a single pair of conductors can be used to measure in a meaningful way BOTH moisture on the surface of the absorbent material (typically wood) at positions along the length of the tape AND moisture absorbed in the material at a plurality of positions along the tape. This requires a specific location of the components and an operation of the method. There is simply no suggestion in any of the prior art that such a system of elongate tapes and multiple probe positions will provide a valuable measure of moisture in the material.

The Examiner deals with this point apparently only in paragraph 18 of the Action. In this paragraph the Examiner admits that neither Stewart nor Gott

disclose the use of probes but refers to Rutkowski and Roseneau.

Rutkowski discloses that wallboard is attached to studs or trusses by a strip of metal with hot melt adhesive on both sides with the strip located between the board and the trusses. As pointed out by the Examiner the strip is attached by staples which "*function as a temporary means of maintaining strip 10 in proper relation....*" (Column 1 line 66)

Rutkowski does not in any way relate to moisture measurement nor suggest anything in relation to moisture measurement. It is submitted therefore that there is no motivation to add the staples of Rutkowski to the tapes of Stewart or Gott. There is no suggestion in Stewart or Gott that there is any problem with attachment of the tapes. The tapes of Stewart or Gott are not used in any structural manner and are often covered so that there is no requirement for any strong connection. Rutkowski requires the staples because he uses a hot melt adhesive which must be activated so that the tape must be held temporarily in place. Measuring tapes such as those of the present invention or of Stewart or Gott will use contact adhesive so that no temporary holding is required.

Even if the person skilled in the art were to use the teaching of Rutkowski in regard to the moisture measurement systems of Stewart or Gott, the only manner in which the teaching of Rutkowski would be used is to temporarily attach the tape. This does not teach that the staples should or must electrically contact the conductors. In fact it is well known that such staples, when used with electrical materials, should actively avoid the electrical conductors to avoid interference with the operation of the conductors. There is no motivation in any of

these documents to try to use the staples in some way in the measuring system.

It is submitted, therefore, that this combination, even if proper, does not in any way suggest that a single pair of conductors can be used to measure in a meaningful way **BOTH** moisture on the surface of the absorbent material (typically wood) at positions along the length of the tape **AND** moisture absorbed in the material at a plurality of positions along the tape.

With regard to the Prior art of **Rosenau** (4259633), this discloses a single pair of stainless steel pins (or probes) 28 and 30 which are driven into the wood to measure moisture content. It is admitted that such single pairs of probes are previous known for measurement of moisture at a specific location.

However this pair of pins is not associated with longitudinally extending conductors of a measuring tape. These pins are not arranged in a plurality of pairs connected to conductors at spaced positions along the conductors.

The pair of pins of Roseneau includes a complex adjustable measuring circuit which is adjusted for different situations and different wood materials.

This specification in column 1 line 27 states in relation to prior art probe type measuring devices:

"However these devices are generally acknowledged to be somewhat inaccurate and especially unreliable at moisture levels above 30% "
(emphasis added)

This specification at the bottom of column 3 leading onto column 4 states:

"In the range of voltages developed in battery powered devices,

serious errors are introduced by not accounting for reverse voltage effects. The present invention takes account of the above described reverse voltage effects by generally applying voltages to the wood samples being tested above or at the critical level for developing maximum reverse voltage effects, and by adjusting the voltage applied to the wood sample to correct for reverse voltage effects inherent in different wood species. The foregoing provisions of the present invention permit meaningful and accurate moisture measurements even at high moisture levels. " (emphasis added)

It is therefore a fundamental feature of the disclosure of Roseneau that the voltage level applied across the probes 28 and 30 is controlled and adjusted in dependence on the location of the probes. Thus Roseneau teaches that each pair of probes must be connected to a respective control circuit for accurate control of the voltage applied.

Roseneau therefore teaches that each pair of probes is separate from each other pair of probes because it must be individually controlled.

If one were to use the tape of the Stewart or Gott and a plurality of the pairs of probes of Roseneau in combination, the skilled person would simply provide a **separate measuring device** of each component of moisture measurement. In this way each tape of Stewart or Gott would be individually monitored and each pair of Roseneau probes must be individually monitored.

The present inventors have realized for the first time that parallel simultaneous measurement of the moisture across the tape, that is moisture **on** the surface of the material, **and** the moisture across the probes that is moisture **within**

the material, is possible and will provide valuable information on the total moisture content. This concept is not disclosed in any document of the prior art and is not obvious from a combination of the prior art for the reasons stated above

It is submitted that the Claims 12, 21 and 29 presented herein are in good order for allowance.

The Examiner is advised that a mere restatement of the rejections previously presented based on the same prior art will lead to the filing of an Appeal.

Respectfully submitted

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